

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended): A method of automatic navigation assistance for an aircraft, comprising the steps of:

aircraft capturing a predetermined vertical profile segment aircraft in a capture zone;

applying a transition between a first guidance submode which the aircraft is in, and ~~[[the]]~~ a second guidance submode adapted to ~~the following of~~ follow the vertical profile segment to be captured; and

determining ~~[[the]]~~ a width of the capture zone as a function of the height h of the vertical profile segment to be captured and of the speed v ~~[[which]]~~ of the aircraft ~~[[has]]~~ when plumb with this height when the aircraft is not on the vertical profile segment ~~[[or]]~~ and at this height when the aircraft is on the vertical profile segment.

2. (Previously Presented): The method as claimed in claim 1, wherein the width of the capture zone is determined as a function of the height h and of the square of the speed v .

3. (Previously Presented): The method as claimed in claim 1, wherein the width of the capture zone is equal to around $2\Delta h$ with

$$\Delta h = h' - h = h_s + \left[h + \frac{v^2}{2g} \right] \frac{1}{K}$$

h' being the height of the upper bound of the capture zone, h_s a safety height, g the terrestrial acceleration and K an adaptation constant.

4. (Currently Amended): A device for automatic navigation assistance for an aircraft having a program memory, comprising:

the program memory has a program for computing the width of a capture zone, [[a]] the capture zone being a zone in which the aircraft can capture a predetermined vertical profile segment by applying a transition between [[the]] a first guidance submode which the aircraft is currently in and [[the]] a second guidance submode adapted to the following of follow the vertical profile segment to be captured, [[the]] a width of the capture zone being calculated as a function of [[the]] a height h of the vertical profile segment to be captured and of [[the]] a speed v [[which]] of the aircraft [[has]] when plumb with [[this]] the height h when the aircraft is not on the vertical profile segment [[or]] and at [[this]] the height h when the aircraft is on the vertical profile segment.

5. (Previously Presented): The device as claimed in claim 4, wherein the program memory includes a program for computing the width of a capture zone as a function of the height h and of the square of the speed v.

6. (Currently Amended): The ~~method~~ device as claimed in claim ~~[[2]]~~ 4, wherein the width of the capture zone is equal to around $2\Delta h$ with

$$\Delta h = h' - h = h_s + \left[h + \frac{v^2}{2g} \right] \frac{1}{K}$$

h' being the height of the upper bound of the capture zone, h_s a safety height, g the terrestrial acceleration and K an adaptation constant.